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APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF CAMBODIA

IPF (4th Cycle + previous balances) $53 714 000
(KAM/91/006)-Rehabilitation of Key Hydraulic/Irrigation Structures Damaged by 1991 Floods

Date of approval by the AC: [1]	11 December 1991
Expected duration:	Seven months
Proposed executing agency:	Mekong Secretariat
Government implementing agency:	Hydrology Department (Ministry of Agriculture)
Proposed UNDP contribution:	$624 900 Sources of funds: IPF $374 900, SPR $250 000
Total UNDP budget:	$624 900

Project background

In August-September 1991, Cambodia suffered its worst flooding in 37 years. At the outset, from 20 to 22 August 1991, typhoon "Fred" caused heavy rainfall throughout North and Northeast Thailand, Laos, Vietnam and Cambodia, resulting in flooding of large areas and inconsiderable damage, with some loss of life. In Cambodia and particularly southern Laos, continued heavy rains throughout the remainder of August and the first half of September resulted in further flooding and major damage to crops and infrastructure.

Although flooding along the Mekong and other major rivers is an annual event for which the population is somewhat prepared, the extent of the present flooding in terms of shelter and agricultural damages is much beyond the norm and perhaps unprecedented as claimed by the authorities. According to data available, water levels reached were certainly the highest in 37 years.

The impact figures reported by the National Flood Relief Committees indicate that more than 650,000 people were affected (some 132,000 families) across 12 provinces. Some 243,000 hectares of rice fields were flooded of which more than 143,000 were totally destroyed. To appreciate the magnitude of this damage, 143,000 hectares represent over ten per cent of the total harvested area of the 1990 wet season crop. The value of the crop lost represents approximately (US$)38 million (at a market price of $300 per ton). Seen against the backdrop of Asia's poorest country where the overwhelming majority of the population is engaged in subsistence based agriculture, the extent of the damage caused by this natural disaster can be better appreciated. Secondary crops, housing, and livestock were also hard hit. Irrigation systems and general infrastructure also suffered extensive damage.

During the Emergency phase of the flood relief programme, the Cambodian authorities identified a wide range of immediate emergency relief needs including rice, sandbags, medicines, animal vaccines, survival kits, shelter kits, and vegetable and rice seeds. According to UNDRO's latest situation report of 5 December 1991 over $6.5 million was raised by the International Community and channelled through the Flood Disaster Management Team chaired by UNDP

[1] This Fact Sheet reflects the status of the project/revision at the time it was approved by the Action Committee; modifications to the project/revision may have occurred subsequently.

in its capacity as representative of the Office of the United Nations Disaster Relief Co-ordinator (UNDRO), which also launched an appeal with respect to the 1991 Cambodia floods. UNDP committed (US$)50,000 in SPR funds for emergency flood relief.

Description of project

The Ministry of Agriculture reported extensive damage to some 261 hydraulic/irrigation structures, 37 of which were classified as needing "emergency" rehabilitation before the onset of the next dry season crop (i.e. January 1992). These structures include dams, dikes, canals, canal regulators and bridges. Failure to rehabilitate these structures will in many cases mean a drought situation in the dry season, resulting in an even greater food deficit in 1992. Of the 261 irrigation structures requiring rehabilitation, 10 were selected by the Cambodian authorities to be considered by UNDP for immediate rehabilitation. These ten were then studied by a UNDP assessment mission made up of representatives from the Mekong Secretariat, FAO and ESCAP. The mission established that the activities proposed for these selected structures were worthwhile on both a technical and cost-effectiveness basis.

The proposed project will rehabilitate these 10 structures, all of which have been damaged by flooding. The development objective of the project is to offset some of the effects of the disastrous floods on Cambodia's rice production through the rehabilitation of selected irrigation/hydrology structures thereby reducing the expected 1992 rice deficit.

The immediate objective is to repair by January 1992, flood-damaged hydraulic/irrigation structures at seven locations in Kompong Cham, Kompong Speu, Takeo and Prey Veng provinces to permit irrigation of 11,600 hectares in the coming winter/spring 1992 dry season and 16,300 hectares in the next wet season, and to strengthen these structures to better withstand future flooding.

A second objective is to reconstruct, by July 1992, three flood-damaged hydraulic/irrigation systems in Kompong Cham, Kandal and Takeo provinces to permit irrigation of 6,200 hectares of dry season and 12,300 hectares of wet season crops in future years and to ensure the long-term sustainability of the structures. It is expected that by the end of the project, the 10 hydraulic/irrigation structures identified above (B 1) will have been not only restored but reconstructed and better designed to withstand future flooding.

By end-January 1992 it is expected that the following seven structures will be repaired (in time for the dry season): Tuk Chhar Reservoir in Kompong Cham province (400/3,000 hectares); Roleang Chrey Irrigation System, Kompong Speu province (2,000/2,000 hectares); Antakep Dam, Kompong Speu province (200/2,000 hectares); Prey Dhdal Irrigation System, Kompong Speu province (300/300 hectares); Tonle Batie Irrigation System, Takeo province (2,000/3,000 hectares); Kompong Sne Reservoir, Prey Veng Province (6,000/6,000 hectares); and Barai Andet Dam, Prey Veng Province (700 hectares dry season only).

By the end of July 1992 (the conclusion of the project), the following three structures will be reconstructed, allowing irrigation of dry season and wet season rice land as indicated; Pdauchum and Satba Dams, Kompong Cham province (200/4,300 hectares); Kandal Stung Irrigation System, Kandal Province (1,000/3,000 hectares); and Tnot Te Reservoir, Takeo province (5,000/5,000 hectares).

Inputs

UNDP will provide the services of a CTA/construction specialist (seven work-months) for overall project co-ordination and field level management and of an administrative assistant (seven work-months); travel, evaluation; equipment and supplies.

Financial data

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Personnel	103 100
Equipment	514 500
Miscellaneous	7 300
Total	624 900